

REMARKS

The application has been reviewed and revised in light of the Office Action mailed on March 23, 2005. Claims 1-30 are currently pending in the application with Claims 1, 12, 18, 21, 23 and 27 being in independent form. By this amendment, Claims 1, 12, 18, 21, 23 and 27 have been amended. In the specification, the title has been replaced with a new title which is indicative of the invention to which the claims are directed. In addition, with respect to the specification, the paragraphs beginning at page 23, line 14 and ending at page 25, line 11 have been deleted. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Rejection of Claims 1-30 Under 35 U.S.C. § 103

Claims 1-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Feng (US 20010003346) in view of Gardiner et al. (US 20030062413). According to the Office Action, Feng discloses the features of the subject invention except for a substrate. The Office Action relied on Gardiner et al. to add the substrate and asserted that it would have been obvious to an artisan of ordinary skilled in the art to combine the teachings of Feng with those of Gardiner et al. to produce the imaging and illumination engine of the subject invention.

The Feng disclosure is directed to a portable data collection device 10 having housing 12 defining an interior region; imaging assembly 18; illumination assembly 42; board camera assembly 38 having an optical assembly 43; and photo sensor array 48. Page 5, paragraphs 0074, 0077 and 0079. According to Feng, "Under the control of a microprocessor 266 mounted on the control and decoder board 22, the video signal 262 is input to the signal processing circuitry 264 along with clocking signals 268 and synchronization signals 270." Page 11, paragraph 0123.

The Gardiner et al. disclosure is directed to an imaging device 110 having imaging module 10. Imaging module 10 includes a single PCB 14a; surface integrated aiming LEDs 18; illumination LEDs 16; image sensor 32; and programmable control circuit 140. See FIGS. 2e and 10e; Page 4, paragraph 0098; Page 5 and 6, paragraph 0102; and Page 24, paragraph 0227. "... [I]t is useful to configure processor system 140 communication with a host processor system so that certain components of imaging device 110 such as trigger 113t can be controlled remotely by host processor systems 170s, which in one embodiment is nonintegrated." Page 27, paragraph 0248.

It is respectfully submitted that the subject matter recited by the claims is patentably distinguishable from Feng, Gardiner et al., and the combination thereof. Neither Feng nor Gardiner et al. describe a plug-and-play imaging engine as recited by all of Applicants' independent claims. In particular, neither of these references discloses or suggests a "plug-and-play imaging engine comprising an interface having at least one signal path," as recited by independent Claim 1, and "placing a plug-and-play imaging engine having an interface within a form factor," as recited by independent Claim 18 (Emphasis added). Independent Claims 12, 21, 23 and 27 recite similar limitations as Claims 1 and 18. The term "plug-and-play" as known in the art describes a first device's ability to receive a second device, normally peripherals, without having to reconfigure the first device. See, for example, definition of plug-and-play at www.wikipedia.org.

As understood by the Applicants neither the portable data collection device 10 of Feng nor the imaging module 10 of Gardiner et al. are plug-and-play devices. In Feng, the imaging assembly 18 includes a modular portion 20 and a control and decoder board 22 electrically coupled to the electronic circuitry in the modular portion 20. Page 5, paragraph

0074. There is no disclosure or suggestion by Feng that portable data collection device 10 is plug-and-play.

With respect to Gardiner et al., Gardiner et al. expressly discloses the configuration of control circuit or processor system 140 of imaging module 10 in order for the imaging module 10 to communicate with a host processor system, in order for certain components of the imaging device 110, such as trigger 113t, to be controlled remotely by the host processor system 170s. See Page 27, paragraph 0248. Gardiner et al. further discloses that “[n]onintegrated local processor system 170s also can be configured to receive messages and/or image data from more than one imaging device [110].” See Page 27, paragraph 0249.

Accordingly, the imaging module 10 is not a plug-an-play imaging module.

Accordingly, independent Claims 1, 12, 18, 21, 23 and 27 are believed to be patentably distinct over Feng, Gardiner et al. and the combination thereof. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of independent Claims 1, 12, 18, 21, 23, and 27 is earnestly solicited. Dependent Claims 2-11, 13-17, 19-20, 22, 24-26 and 28-30 depend from independent Claims 1, 12, 18, 21, 23 and 27, and are therefore patentable for at least the reasons given above for independent Claims 1, 12, 18, 21, 23 and 27.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that none of the references of record, considered individually or in combination, in whole or in part, disclose or suggest the present invention as claimed. Therefore, all claims now pending in this application, namely Claims 1-30, are now in condition for allowance. Accordingly, early and favorable consideration of this application is respectfully requested. Should the Examiner

believe that a telephone or personal interview may facilitate resolution of any remaining matters,
he is respectfully requested to contact Applicants' undersigned attorney at the telephone number
indicated below.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "George Likourezos", written over a horizontal line.

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